REMARKS

In the Final Office Action, the examiner maintains that the combination of Dillon (US2002/0137520) and Lewis (US6847821) renders clams 1 – 45 obvious under §103(a). The applicants disagree and offer the following remarks in response.

The finality of the pending office action is improper. MPEP §706.07 states: "Before final rejection is in order a clear issue should be developed between the examiner and applicant." As noted by the applicants in the response dated 12 March 2007 (see pp. 13 – 14), the rejections cited in the previous Office Action fail to address the specific language of claims 2, 21 – 23, 27, 28, 30, 32- 34, 36, 37, 39 – 41, and 43 – 45. Because the pending Final Office Action plainly ignores the explicitly claimed limitations in the dependent claims, the applicants submit that the examiner has yet to develop a clear issue with the applicants regarding the rejection of these claims, as required by MPEP §706.07. Thus, the finality of the current Office Action is improper and must be withdrawn.

Independent claims 1 and 14 are rejected over the combination of Dillon and Lewis. The 103 rejection legally fails not least because it fails in any way to address the specifically claimed limitations in the dependent claims. The 103 rejection legally fails also because the secondary reference, Lewis, unambiguously relates to using time-division multiplexing to send voice and non-voice data over the same radio signal to one user, and not to monitoring usage of a shared resource within any legally or technically accurate meaning. The examiner's characterization of Lewis as teaching anything relevant to Dillon's context of multiple users having multiple radio channels is without merit and will not survive scrutiny by the board on appeal.

Indeed, there are several facial errors in the 103 rejection. For example, on the one hand, the crux of the examiner's 103 rejection depends on the assertion that Dillon teaches voice and data user sharing resources in a CDMA network. On the other hand, the rejection states that Dillon is silent regarding shared network resources. Specifically, it appears that the

examiner's rejection arguments admit that Dillon does not teach the limitation of claim 1 of "monitoring a combined usage of a shared network resource by current voice and data users." The examiner erroneously states that Lewis provides this missing limitation and that Lewis would have been obvious to combine with Dillon.

Frankly, the use of Lewis has no merit and will not survive scrutiny on appeal. First, Lewis is self-evidently directed to putting voice and data for one user on one dedicated radio channel allocated to that one user, based on time division multiplexing. That arrangement is inapposite to Dillon, which teaches multiple, different radio channels allocated to multiple, different users. Thus, there is no monitoring of a shared resource in Lewis in any sense meaningful in the context of Dillon. Applicant notes that the obviousness argument for combining Lewis with Dillon on p. 4 of the final Office Action states that one would combine Lewis with Dillon "in order to allow voice and non-voice data transmit [sic] in a single channel, thus freeing other channels for other tasks of freeing resource capacity for the system...."

That argument for obviousness demonstrates that the examiner misunderstands Dillon and Lewis. Dillon by definition depends on different users having different channels, and depends on the ability to manipulate the individual channel gains of the different channels, to reduce overall interference. (See col. 3 of Dillon.) Dillon does not work with, nor would work with, the single-channel, time-multiplexing of Lewis, and the interference caused by simultaneous transmission of voice and data on different channels to different users does not exist in the world of Lewis, where voice is sent on the dedicated channel of a single user at one time slot, and data is sent on that same dedicated channel at another time slot. Indeed, the same Abstract that the examiner cites as supporting Lewis's teachings of monitoring a resource shared in combination by voice and data users states explicitly that Lewis relates to "simultaneous transmission of voice and non-voice data over a single dedicated radio frequency channel to a mobile unit having a primary transmission bandwidth." (Emphasis added.)

Further, note that col. 2, lines 2-4, in Lewis state the motivation for Lewis's invention as being the desire to use TDMA technology to make voice and non-voice data "ride" on the same signal, thereby freeing other channels for other tasks. Contrast that with Dillon, which states in paragraph 0023 that its invention is directed to overcoming the interference problem created when high-speed data users are transmitting on supplemental channels in the same cell as voice users. The plural "users" in Dillon definitively means more than one user, more than one radio channel, and overall levels of interference from multiple users provides the basis for Dillon's signal-to-noise ratio based processing. Lewis's single-user approach of using TDMA to send voice at one time and non-voice at another time on the same dedicated signal has nothing to do with Dillon, and the attempt to combine Lewis with Dillon is legal error.

As further error, the Final Rejection states that Dillon is silent regarding shared network resources--a shared resource whose combined usage include voice and data users, but contradictorily states that Dillon teaches claim 1's "resource release threshold," which is defined by the claim as the usage threshold which, if reached by combined usage of the claimed shared resource, triggers a usage reduction of the shared resource by a desired amount.

In more detail, the 103 rejection depends on the examiner's argument that Dillon's predetermined acceptable signal-to-noise ratio is the claimed resource release threshold. Dillon contradicts that interpretation. Paragraph 0028 of Dillon does teach that Dillon recognizes high interference by comparing the measured E_c/I_{or} for a cell to a predetermined acceptable signal-to-noise ratio. However, that predetermined value in Dillon is not a release threshold within the meaning of our claims because Dillon does not teach releasing shared resources responsive to the acceptable ratio being violated. Instead, Fig. 3 and paragraphs 0029 and 0030 of Dillon explicitly state that Dillon raises channel gains and terminates its processing if it detects that E_c/I_{or} is below the predetermined acceptable signal-to-noise ratio. Only if there is no ability to increase channel gains does Dillon begin reducing gains on selected channels.

The applicants further note that at least claims 2, 7 – 13, 15, 18, 21 – 24, 26, 28 – 30, 32, 36, 39 – 41 , 43, and 44 add patentably distinct limitations to the independent claims. For example, nothing in Dillon or Lewis monitors the combined usage of a transmit power (claims 2, 15, and 32), an average transmit power (claim 36), or a spreading code usage (claims 10, 23, and 40). At best, Dillon teaches monitoring a calculated performance parameter (E_c/I_{or}).

Further, nothing in Dillon or Lewis teaches or suggests ranking data users based on a particular metric, e.g., a forward link power-to-data-rate metric (claims 8, 29, and 44), an efficiency metric (claim 43), a particular service objective or constraint (claims 9, 21, and 22), or a data rate (claim 28). In addition, nothing in Dillon or Lewis teaches or suggests selecting the users targeted for a resource release based on a rank of the current data users and on a targeted aggregate reduction amount (claim 26). At best Dillon categorizes the network users based on the type of service (i.e., voice, Internet, or FTP) currently being provided to the user (see ¶[0029]).

In addition, neither Dillon nor Lewis teach or suggest changing a radio service configuration (claims 7, 30, and 39), reducing a spreading code usage/changing a spreading code assignment (claims 11, 12, 24, and 41), or reducing a maximum transmit power below a current average transmit power (claim 18) when the combined usage exceeds a threshold. At best, Dillon teaches reducing the gain of one or more users during high interference conditions until the voice calls are no longer in danger of being dropped (see ¶[0034]).

Lastly, neither Dillon nor Lewis teach or suggest "reducing an aggregate usage of the shared network resource by the data users subject to one or more minimum usage constraints such that resources are not released from the current data users in violation of any minimum usage constraint" (claim 13). First, while the examiner asserts that Lewis teaches this limitation, the examiner cites sections of Dillon to support the rejection. Thus, at the very least this

rejection is unclear. Regardless, neither Dillon nor Lewis mention any type of usage reduction control based on minimum usage constraints.

For at least these reasons, claims 2, 7 – 13, 15, 18, 21 – 24, 26, 28 – 30, 32, 36, 39 – 41, 43, and 44 add patentably distinct limitations to the corresponding independent claims. The applicants respectfully request reconsideration.

In light of the above remarks, the applicants respectfully request that the examiner reconsider and withdraw the pending rejections. Should the examiner insist on maintaining any of the rejections, the applicants request that the examiner formally address each of the argument points presented herein. The applicants note that the pending Final Office Action fails to address the applicants' previously submitted remarks regarding Lewis with respect to the independent claims and regarding the patentability of dependent claims 2, 7 – 13, 15, 18, 21 – 24, 26, 28 – 30, 32, 36, 39 – 41 , 43, and 44 (which were repeated above for convenience). Thus, in order to develop a clear record on each matter at issue, the applicants respectfully request that the examiner correct this oversight in any subsequent communication.

While the applicants believe the above response addresses all outstanding issues, the applicants request that the examiner call the undersigned so that any remaining issues may be expeditiously resolved.

Respectfully submitted,

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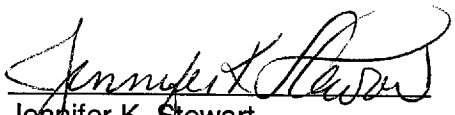

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